



Contact us
+353 1 5242060
info@ors.ie
www.ors.ie

**Social Housing Bundle 4,
Development at Church of Annunciation,
Finglas.
Construction Environmental Management Plan
(CEMP)
Dublin City Council**

**Church of the Annunciation, Finglas, Dublin.
Construction Environmental Management Plan (CEMP)**

Document Control Sheet

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Table of Contents

1	Introduction	1
1.1	Objective of Construction Environmental Management Plan	1
1.2	Responsibility	1
2	Site Details	2
2.1	Site Location	2
2.2	Site Environmental Considerations	3
2.2.1	Topography	3
2.2.2	Geology, Hydrology & Hydrogeology	3
2.2.3	Groundwater Vulnerability	4
2.2.4	Flood Risk	4
2.2.5	Archaeology	5
2.2.6	Ecological Receptors	5
2.2.7	Historical Maps	6
2.2.8	Noise Pollution	6
3	Development Description	8
3.1	Phasing of the Development	8
3.2	Pre-Construction Activities	10
3.2.1	Site Set-Up and Hoarding	10
3.2.2	Communication	11
3.3	Construction Sequence of New Structures	11
3.4	Site Working Hours	12
4	Environmental Management Plan	13
4.1	Background	13
4.2	Noise	13
4.3	Dust and Air Quality	14
4.4	Surface Water and Groundwater Protection	14
4.5	Protection of Ecological Receptors	15
4.5.1	Screening for Appropriate Assessment	15
4.5.2	Ecological Impact Assessment	16
5	Outline Traffic Management Plan	18
5.1	Background	18
5.2	Outline Traffic Management Plan	18
5.3	Construction Entrance and Construction Traffic Control	19
5.3.1	Access in	19
5.3.2	Access Out	19
5.4	Deliveries to Site / Site Access	20
5.5	Routing of Construction Traffic	20
5.6	Traffic Management Speed Limits	22
5.7	Road Cleaning	22
5.8	Road Condition	23
5.9	Enforcement of TMP	23
5.10	Working Hours	24
5.11	Emergency Procedures	24
5.12	Communication	24
6	Implementation	25
6.1	Role and Responsibilities	25
6.1.1	Construction Project Manager	25
6.1.2	Construction Project Manager Contact Details	25

ORS

6.1.3	Project Environmental Consultant	25
6.1.4	Resident Engineer	26
6.2	Awareness and Training	26
6.2.1	Environmental Induction	26
6.2.2	Toolbox Talks	26
6.3	Environmental Incidents and Complaints Procedure	27
7	Conclusion	28
	Appendix A: Risk Assessment as per Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition	
	Appendix B: Waste Register	
	Appendix C: Licensed Waste Facilities	

1 Introduction

This report is prepared in support of a planning application for Dublin City Council for the proposed construction of 110 residential dwellings at a site c.0.77 ha at the site of the former Church of Annunciation on Cardiffsbridge Road, Finglas, Dublin 11, which will consist of the following:

- i. One apartment block ranging from 4 to 5-storeys, containing:
 - o 110 residential units (106 no. 1-bed and 4 no. 2 bed); and
 - o 434 sq.m. of community, arts and cultural facilities.
- ii. 15 no. car parking spaces and 87 no. cycle spaces.
- iii. 935 sq.m. of public open space and 609 sq.m. of communal open space
- iv. One vehicular and pedestrian access and one dedicated pedestrian access off Cardiffsbridge Road
- v. Boundary treatments, public lighting, site drainage works. Internal road surfacing and footpath, ESB meter rooms, plant rooms, stores, bin and bicycle storage, landscaping; and
- vi. All ancillary site services and development works above and below ground.

1.1 Objective of Construction Environmental Management Plan

This Construction Environmental Management Plan (CEMP) is an outline document of the proposed approach to ensure that construction activities have the least impact on the surrounding environment. Below is an outline of the objectives:

- Ensure appropriate measures to prevent or mitigate nuisance emissions of noise and dust.
- Ensure that discharges to surface/groundwater sources are controlled.
- Ensure that any nearby ecological receptors (SPAs, SACs, NHAs) and archaeological sites are not adversely impacted by construction activities.
- Minimise the impact on local traffic conditions resulting from construction activities.
- Outline how the measures proposed above shall be implemented.

This CEMP has been prepared for the planning phase of the development to outline the general considerations of the works, from initial enabling works to sub-structure and superstructure construction with regards to waste and the environment. A contractor is yet to be appointed to this project. This document will be revised upon appointment of an experienced and competent contractor, and the development will be constructed in accordance with the environmental management measures contained herein.

The CEMP, due to its structure and nature, will also require constant updating and revision throughout the construction period. Therefore, this is a working document and will be developed further prior to and during construction.

1.2 Responsibility

A contractor has not yet been appointed to carry out the proposed project. Once appointed it will be the responsibility of the contractor to maintain and update the construction stage CEMP throughout the work and this updated document will be issued to Dublin City Council.

2 Site Details

2.1 Site Location

The proposed site is located on Cardiffsbridge Road in Finglas, Co. Dublin. It is the site of the former church as shown in **Figure 2.1** below. The proposed development is located within land zoned as Z1 and Z15 by the Dublin City Council. The site is within a developed residential area in Finglas, Dublin. The site's current access point is through the carpark located on the northern border of the site, accessible via a gate. Access is planned for construction on the northwestern perimeter of the site (detailed in **Section 5**).

The site is bounded by the Coláiste Eoin secondary school and St Brigid's Infant National School to the northeast and southeast, respectively. Leisure Point, a recreational centre, is directly south of the site, with residential area's bounding the southwest and northwest localities of the site. Kildonan Park is situated north of the site.

An approximate outline of the subject site and its environs is provided in **Figure 2.1** below.



Figure 2.1: Site location and environs (Source: Google Maps)

2.2 Site Environmental Considerations

2.2.1 Topography

The proposed residential development is to be constructed on the site of the Church of Annunciation which is currently a vacant site. The topography ranges from 62.6m OD to the southeastern corner of the site, to 64.8m OD to centre of the site.

2.2.2 Geology, Hydrology & Hydrogeology

Maps generated by the Environmental Protection Agency (EPA) and featuring data from the EU Water Framework Directive (WFD) were consulted to assess the extent and quality of waterbodies present in the vicinity of the proposed development. The closest waterbody to the site consists of the Scribblestown Stream which is ca. 680m southwest of the proposed site. The Bachelors Stream is ca. 780m east of the site, the Tolka River runs ca. 1.1km south of the site and the Finglaswood Steam runs ca. 1.2km southeast of the site.

Taking the scale and nature of the proposed development into consideration, only waterbodies within a 1.5km radius of the site were considered as potential receptors, and as such, only these waterbodies were included in this analysis. A summary of the nearest waterbodies can be found in **Table 2.1** below.

Waterbody	WFD Sub-basin Name	Code	Distance from Site	Direction from Site
Scribblestown Stream	TOLKA_050	IE_EA_09T011100	680 m	Southwest
Bachelor's Stream	TOLKA_050	IE_EA_09T011100	780 m	East
Tolka River	TOLKA_050	IE_EA_09T011100	1100 m	South
Finglaswood Stream	TOLKA_050	IE_EA_09T011100	1200 m	Southeast

The WFD runs in 6-year cycles with the most recent data being generated between 2016-2021. The Directive takes rivers, lakes, estuaries, groundwater and coastal waters into consideration and each waterbody can be assigned one of five statuses: High, Good, Moderate, Poor, and Bad. Additionally, waterbodies can be assigned a risk level (“At Risk”, “Not At Risk”, “Review”) which represents the risk of the waterbody of failing its WFD objectives by 2027.

The WFD Status of each of the waterbodies in close proximity to the site is designated as “Poor” and have been assigned a risk level of “At Risk.”

The Tolka River is the most significant waterbody in the Finglas area. The Tolka River rises east of Dunshaughlin, County Meath, and flows through Dunboyne, Mulhuddart, South Finglas and finally passes through North Dublin suburbs, Glasnevin and Drumcondra, following course directly into Dublin’s North Bay. The river flows into Dublin Bay directly passed the North Bull Island Special Protection Area. The Tolka has many tributaries, including Castle Stream at Dunboyne and the Clonee Stream East of Clonee, which both fall within the borders of County

Meath. Inside the Dublin border, it's estimated that there are at least fourteen tributaries flowing into the Tolka River before it discharges into the Irish Sea. 3 major tributaries are referenced in this CEMP – Scribblestown Stream, Bachelor's Stream and Finglaswood Stream.

The proposed site is located within WFD catchment 09, Liffey and Dublin Bay, and is located within sub-catchment "Tolka_SC_020". The 3rd Cycle Draft Liffey and Dublin Bay Catchment Report (HA 09) published in 2021 provides a summary of the quality assessment outcomes of waterbodies within the catchment. According to this report, The Liffey is deemed "At Risk" due to urban run-off and urban wastewater treatment agglomerations (combined sewer overflows). The closest waterbody consists of minor waterbodies within the perimeter of the Phoenix Park which are not considered to be lake waterbodies. The closest lake waterbody to the site development is the Leixlip Reservoir which is situated ca. 12.3km to the west. This is a heavily modified water body which serves dual purposes for power generation and drinking water supply. It possesses a WFD status of "Poor", and its risk level is currently "Under Review".

The site was cross-referenced with the Teagasc Soil Information System (SIS) soil profile map which states that the surface soil at the site location is classed as 'Urban'. Urban soils are formed from human construction and industrial activities along with fuel combustion, transport emissions and waste dumping and therefore contain manufactured materials and waste. The subsoil of the site is classed as "made". Subsoil classification within the confines of Dublin city is predominantly "made".

2.2.3 Groundwater Vulnerability

According to the Geological Survey of Ireland map viewer, the site is underlain by a Locally Important Aquifer consisting of made ground bedrock which is moderate to poorly productive in local zones only. The groundwater vulnerability is classed as 'High'.

2.2.4 Flood Risk

The OPW Floodinfo.ie website was consulted for high level information on any potential flood risk on or near the site. The nearest flood incident took place approximately 1.5km away from the planned location. This flood, which resulted in the accumulation of floodwaters in the Glendhu Park vicinity, happened to the south of the site in October 2011. Additionally, another flood occurred in October 2011, approximately 1.7km east of the proposed site. **Table 2.2** summarises the sources of the nearest floods and their proximity to site.

Flood Event Code	Location	Date	Flood Source	Distance from Site
ID-11602	Glendhu Park, Cabra	October 2011	Runoff from Surface Drainage Water	1500 m S
ID-11674	Ballygall Crescent and Fairways Green, Finglas	October 2011	Runoff from Surface Drainage Water	1700 m E
ID-5	Tolka Ballyboggan Road	November 2000	River	1800 m SE
ID-236	Tolka and Finglas Rivers	August 1984	River	2000 m SE

The proposed site itself is of sufficient distance from the projected flood risk area hence the fluvial flood risk is considered to be low. The site is not located within benefitting land associated with the Arterial Drainage or District Drainage Schemes. National Indicative Fluvial Mapping (NIFM) models the extent of land that might be flooded by rivers during a theoretical flood with an estimated probability of occurrence. The proposed site is not within the range of a Medium Probability flood event (1 in 100 years) according to NIFM mapping. Based on current data available it is not foreseen that the development will present any significant increase in flooding risk either within the site or downstream of the site.

2.2.5 Archaeology

According to the Historic Environment map viewer there are no sites of archaeological importance within the proposed site boundaries nor in the nearby vicinity of the site. The nearest site of importance is Cardiff Castle, located ca. 300m east of the proposed site in ruins. Continuing east, there are several sites of historical and archaeological significance including a manor house, ritual site, section of 'King William's Rampart' and St. Canice's Church of Ireland. **Table 2.3** summarises the sources of historical and archaeological importance in a ca. 500m radius of the proposed site.

Table 2.4 Sites of Historical or Archaeological Significance				
Site Code	Site Name	Location	Distance from Site	Description
DU014-066003	Cardiff Castle	Cappagh Road, Finglas	Ca. 340m E	Named on the 1st edition OS 6-inch map (1837) as 'Cardiff castle in ruins'.
DU014-066005	Manor House	Patrickswell Place, Finglas	Ca. 480m E	A manor established by Archbishop Comyn in 1181.
50130002	Post Box	Mellowes Road, Finglas	Ca. 200m NE	n/a

An Archaeological Impact Assessment was completed by John Purcell Archaeological Consultancy in May 2024. The report is summarised as follows:

- The site does not contain any historic structures or archaeological remains.
- The potential for historic remains is low.
- Archaeological testing of the site is recommended for the development prior to commencement.

2.2.6 Ecological Receptors

According to the National Parks & Wildlife Service map viewer, the proposed site is located a sufficient distance (1.5km) from any designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs) or Natural Heritage Areas (NHAs). The nearest designated sites consist of the Royal Canal proposed Natural Heritage Area (pNHA) located ca. 1.4km south of the proposed site. The next nearest designated sites are both over 4km from the proposed site. The Santry Demesne and Liffey Valley proposed NHA's are located ca. 4.2km NE and 4.5km SW of the site, respectively.

An Appropriate Assessment (AA) Screening Report was carried out by NM Ecology Ltd. on

behalf of Dublin City Council and has determined that a Natura Impact Statement (Appropriate Assessment) is not required in respect of this proposed development.

A Preliminary Ecological Appraisal was also carried out by NM Ecology to assess whether any sensitive ecological receptors were present on site. Section 4 of this report summarises the relevant ecological assessment reports and outlines best practice measures for the mitigation of impacts to ecological receptors during the course of works.

Given the scale and nature of the proposed development and its distance to ecological receptors, it is unlikely that any designated sites will be impacted as a result of the works.

2.2.7 Historical Maps

The GeoHive Historic map viewer was consulted to assess previous land uses or developments within or in the vicinity of the proposed site boundaries. According to the First Edition 6" maps developed between 1829-1841, the location of the proposed site previously consisted of farmland which was adjacent to King William's Rampart. From black and white aerial survey maps generated in 1995, the structures of the Church of Annunciation can be seen alongside Coláiste Eoin, St. Fergal's Boys National School and St Brigid's Infant National School. From these 1995 aerial survey maps the area can be seen to be well developed in terms of residential units and urban fabric. area was already quite developed in terms of residential units. The surrounds of the proposed sites have remained relatively unchanged since the 1995 aerial survey maps, with minor density increases in housing estates and residential areas.

2.2.8 Noise Pollution

Under the Environmental Noise Directive (END) 2002/49/EC, members are required to develop strategic noise maps and noise management action plans for transport noise sources every 5 years. These strategic noise maps can be accessed via the EPA.ie website. **Figure 2.2** below outlines the modelled noise extents of the roads in the vicinity of the site undertaken by the EPA. As can be seen the site is not contained within the modelled noise extents of the survey. The new development is not foreseen to significantly increase ambient noise levels. Noise levels along Cardiffsbridge Road range will from 45-59dB as a result of traffic moving through neighbouring estates. The highest concentration of noise generation currently occurs along the Ratoath Road to the west of the site which is a busy regional road. Noise levels along this road range from 55-69dB.

Noise generation during the construction phase is projected to increase due to the movement of heavy goods vehicles and construction equipment along Cardiffsbridge Road and within the site itself. Noise emission within Finglas may increase temporarily, although proposed mitigation steps outlined in **Section 5.2** will ensure that construction traffic is routed in such a way that minimises disruption to nearby amenities and regular flow of traffic.

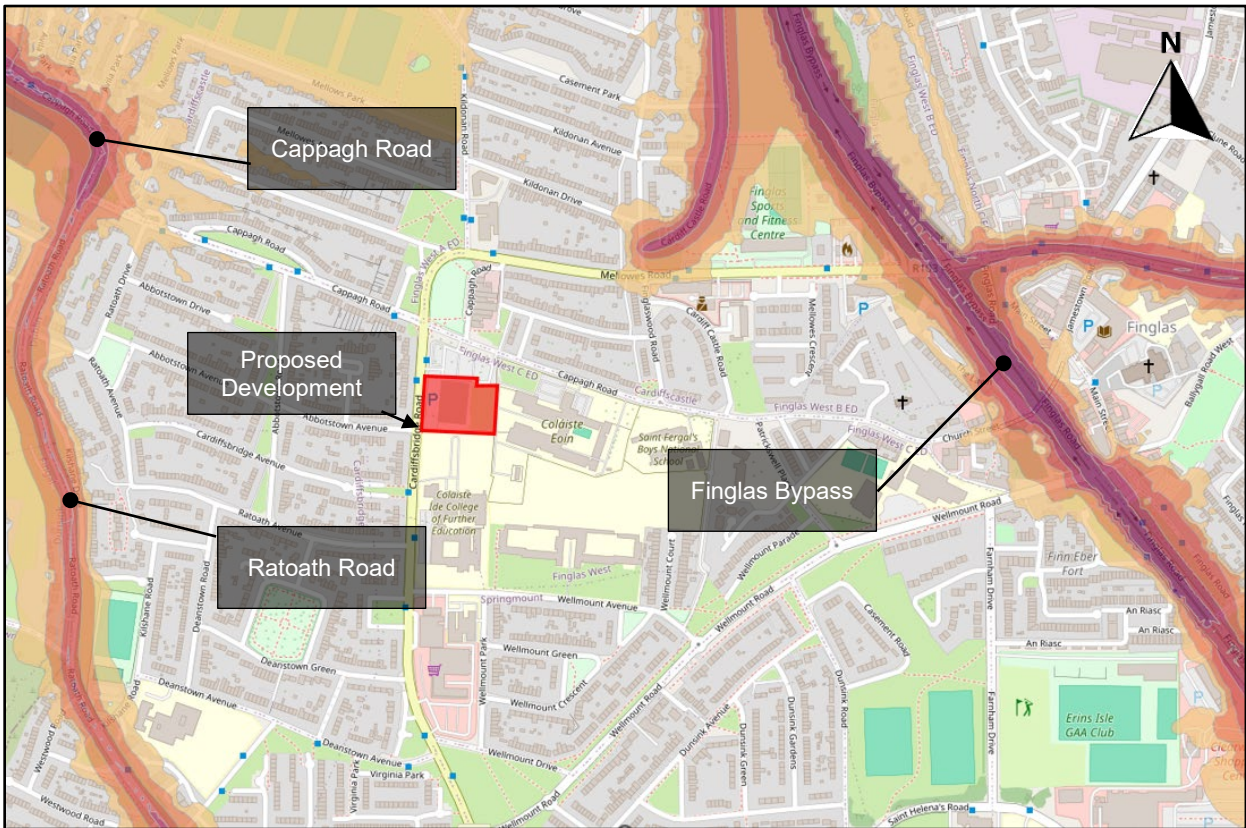


Figure 2.2: EPA Strategic Noise Map (Daytime Noise) (Source: epa.ie Map Viewer)

3 Development Description

3.1 Phasing of the Development

This Construction Environmental Management Plan (CEMP) will outline the intended sequence of works. A construction program of 12 - 18 months serves as the agreed estimated timeline for the project. A layout plan of the development is detailed in **Figure 3.1** below.

The proposed development includes the following sequence of works:

- One apartment block ranging from 4 to 5-storeys, containing:
 - 110 residential units (106 no. 1-bed and 4 no. 2 bed); and
 - 434 sq.m. of community, arts and cultural facilities.
- 15 no. car parking spaces and 87 no. cycle spaces.
- 935 sq.m. of public open space and 609 sq.m. of communal open space
- One vehicular and pedestrian access and one dedicated pedestrian access off Cardiffsbridge Road
- Boundary treatments, public lighting, site drainage works. Internal road surfacing and footpath, ESB meter rooms, plant rooms, stores, bin and bicycle storage, landscaping; and
- All ancillary site services and development works above and below ground.

Access to the development is proposed along Cardiffsbridge Road near the northwestern most corner of the site. North of the site Mellows Road runs from west to east connecting the locality to the Finglas Bypass. **Figure 3.1** shows the proposed site plan.



Figure 3.1: Site Plan (Cropped) (A refinement of this site layout may be circulated by the architect)

The project is to be divided into several distinct phases as follows:

Pre-Construction Phase – Site clearance and preliminary works

- Site set-up, temporary services, site hoarding/fencing, staff welfare facilities
- Removal of any remnants of the Church of Annunciation buildings to facilitate the works.
- Ground works and landscaping.

Phase 1 – Construction

- 110 no. residential units in apartment style buildings.

Ancillary works – which will consist of:

- Sustainable Drainage System (SuDS)
- Surface water and foul sewer network and associated attenuation

- Car and bicycle parking spaces
- Electrical and telecom services
- Mains water supply connections
- Wastewater drainage connections
- Pedestrian access routes
- Permeable paving and green roads
- Landscaping of public and communal open areas

3.2 Pre-Construction Activities

The main contractor will establish site setup, appropriate signing, hoarding, security fencing and welfare facilities.

3.2.1 Site Set-Up and Hoarding

Perimeter hoarding will be provided around the site to provide a barrier against unauthorized access from the public areas. Controlled access points to the site, in the form of gates or doors, will be kept locked at any time that these areas are not monitored (e.g., outside working hours).

The hoarding will be well-maintained and may be painted. Any hoardings may contain graphics portraying project information. The site hoarding may be branded using the appointed Contractors logos, etc. Some marketing images or information boards may also be placed on the hoarding. Access to site will be controlled and monitored outside of site working hours. All personnel working on site must have a valid Safe Pass card and the relevant CSCS cards.

A suitably secure site compound will be set up, wherever the restricted confines of the site will allow and will facilitate the efficient delivery of materials and personnel to the site. This compound is to include material storage, site office and meeting room, and staff welfare facilities. **Figure 3.2** below shows proposed compound sites.



Fig 3.2: Proposed Site Compound Locations

3.2.2 Communication

Communication regarding construction methodologies and phasing will be communicated throughout development through finalised site plans as well as through the relevant Civils Report which will outline the scope of works required. The Site Contractor and Site Manager will ensure effective communication among site personnel and contractors.

3.3 Construction Sequence of New Structures

The exact construction specifications of the proposed residential units and associated infrastructure are yet to be finalised. This section of the CEMP will be updated once a main contractor is appointed and a definitive construction program is established, in advance of the commencement of the project.

A summary of operations for the construction phase is listed in **Table 3.1** below.

Table 3.1: Summary of Operations Expected	
External envelope will or may require the following operations:	Internal work will or may require the following operations:
<ul style="list-style-type: none"> • Blockwork/Brickwork • Sand & cement rendering • Windows & doors • Roof Coverings – Concrete, Green/Blue Roofing • Flashing, Aprons and Tray – Leadwork/Powder coated metal 	<ul style="list-style-type: none"> • Electrical installation • Mechanical installation • Fireproofing • Partitions and ceilings – use of gypsum based products • Painting • Plastering • Stairs • Joinery • Tiling • Air Tightness sealing and testing • Metal Work • Sanitary-ware installation • Vanity units • Reinforcement works • Insulation • Plumbing • Concreting/ floor slab • Carpet installation • Green/Blue Roofing
Above ground external operations:	
<ul style="list-style-type: none"> • Landscaping • Installation of manholes • Lamp posts • Permeable paving and green roads • Signs • Signs • Car parking and mobility compliant car parking 	
Below ground operations:	
<ul style="list-style-type: none"> • Foul sewer, surface water, rainwater, and potable water networks • Stone water storage below permeable paving • Electrical ducting 	

3.4 Site Working Hours

Construction operations on site will generally be subject to a planning permission and conditions. However, it may be necessary for some construction operations to be undertaken outside these times, for example, service diversions and connections, concrete finishing and fit-out works, etc.

Deliveries of materials to site will generally be between the hours of 08:00 – 18:00 Monday to Friday, and 08:00 to 14:00 on Saturdays, or as specified by the Dublin City Council. There may be occasions where it is necessary to make certain deliveries outside these times, for example, where large loads are limited to road usage outside peak times.

4 Environmental Management Plan

4.1 Background

A preliminary risk assessment was carried out for the proposed site location in accordance with the Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition, produced by the London Authorities Noise Action Forum, July 2016. This assessment took into account factors relating to the proximity of the site to sensitive receptors and rated the levels of nuisance and disruption anticipated with scheduled work practices.

Following the completion of this risk assessment, available in **Appendix A**, the proposed development was determined to be a moderate to high risk site. This section outlines suitable measures to minimise nuisance noise and dust emissions in order to minimise any impact of the proposed developments on surrounding receptors.

4.2 Noise

The Contractor will aim to restrict noise levels to the following levels:

- Daytime (08:00 to 19:00 hrs) – 70dB
- Evening (19:00 to 23:00 hrs) – 50dB
- Night-time (23:00 to 08:00 hrs) – 45dB (measured from nearest noise sensitive location).

To minimise noise from construction operations, no heavy construction equipment/ machinery (to include pneumatic drills, construction vehicles, generators, etc.) shall be operated on or adjacent to the construction site before 08:00 or after 19:00, Monday to Friday, and before 08:00 or after 14:00 on Saturdays. No activities shall take place in site on Sundays or Bank Holidays. No activity, which would reasonably be expected to cause annoyance to residents in the vicinity, shall take place on site between the hours of 19:00 and 08:00am.

The proposed development will be obliged to comply with BS 5228 "*Noise Control on Construction and open sites Part 1*". The contractor shall implement the following measures to eliminate or reduce noise levels where possible:

- All site staff shall be briefed on noise mitigation measures and the application of best practicable means to be employed to control noise.
- All staff should be briefed on the complaints procedure, the mitigation requirement and their responsibilities to register and escalate complaints received.
- Good quality site hoarding is to be erected to maximise the reduction in noise levels.
- Contact details of the contractor and site manager shall be displayed to the public, together with the permitted operating hours.
- Material and plant loading and unloading shall only take place during normal working hours.
- Ensure that each item of plant and equipment complies with the noise limits quoted in the relevant European Commission Directive 2000/14/EC.
- Fit all plant and equipment with appropriate mufflers or silencers of the type recommended by the manufacturer.
- Use all plant and equipment only for the tasks for which it has been designed.
- Locate movable plant away from noise sensitive receptors.
- Avoid the transfer of noise and vibration from demolition activities to adjoining occupied

buildings through cutting any vibration transmission path or by structural separation of buildings.

- Ensure written confirmation is received from Dublin City Council Planning Department when applying for extensions to normal working hours. No out of hours work to be undertaken unless permission to do so has been granted.

4.3 Dust and Air Quality

Dust prevention measures will be put in place for any particulate pollution. The extent of dust generation under construction activities being carried out is dependent on environmental factors such as rainfall, wind speed and wind direction. The most likely sources of dust generation at this site include soil stripping and excavation of foundations for the main buildings and the sawing of wood and concrete throughout the duration of the project. Dust can also be dispersed by excessive vehicular movement around the site during dry periods. Control Measures are outlined as follows:

- Soil will not be exposed until a replacing capping layer is almost ready to be placed. This is to ensure that soil is left exposed for the minimum amount of time possible.
- Material stockpiles will be strategically placed to reduce wind exposure. Materials will be ordered on an "as needed" basis to reduce excessive storage.
- The contractor will spray water on the surface of all roads in the vicinity of the site if required in order to minimise dust generation from the construction activities.
- Appropriate dust suppression will be employed to prevent fugitive emissions affecting those occupying neighbouring properties or pathways.
- Restrict vehicle speeds to 15 kmph as high vehicle speeds cause dust to rise.
- Covers or dampening of soil stockpiles when high wind and dry weather are encountered, if required.
- All consignments containing material with the potential to cause air pollution being transported by skips, lorries, trucks or tippers shall be covered during transit on and off site.
- Street and footpath cleaning shall be undertaken during the ground works phase to minimise dust emissions.
- A road sweeper with vacuuming capabilities will operate along construction traffic routes throughout the development cycle to alleviate excessive material deposition along transport routes in the vicinity of the site.
- Wet cut concrete saws are only to be used on site. Tools with dust extraction filters are to be used when and where possible.
- No materials shall be burned on-site.

4.4 Surface Water and Groundwater Protection

Surface water drainage from the proposed site from internal roadways, pedestrian footpaths, roofs, and hardstanding areas will be collected via a gravity drainage network and collected by Blue & Green roofing, by stone storage below permeable paving, swales and rain gardens. An attenuation zone will be located to the east of the site. A number of discrete landscape areas are also proposed which will provide bioretention of rainwater during minor rainfall events. Rainwater resulting from larger storm events will be collected via overflow drainage infrastructure and collected within the attenuation zone. A number of rain gardens will be constructed to provide additional storage of runoff from roads, car parking, and footpaths.

The main pollutants with the potential to impact water receptors are silt, fuel/oil, concrete and chemicals. The steps outlined below aim to eliminate contamination of site surface water runoff. The below recommendations are advised with reference to the Inland Fisheries Board recommendations for protection of adjacent water courses during the construction phase:

- Harmful materials such as fuels, oils, greases, paints, and hydraulic fluids must be stored in bunded compounds well away from storm water drains and gullies. Refuelling of machinery should be carried out using drip trays.
- All manholes and gullies will be covered with silt fencing material and sandbags to limit silt and chemical run-off into surface water.
- Refuelling will not be permitted within 10m of surface drains, with the exception of pumps for dewatering purposes, which are to be stored on portable spill bunds.
- Runoff from machine service and concrete/grout mixing areas must not enter storm water drains and gullies leading off-site.
- No direct discharges to be made to waters where there is potential for cement/ residues/ oils/ chemicals in discharges.
- Stockpile areas for sands and gravel should be kept to minimum size, well away from storm water drains and gullies leading off-site.
- Open excavations to be backfilled immediately following installation of services, etc.
- Earthworks and the movement of plant on soil surfaces will be avoided during periods of extensive rainfall to limit silt laden runoff and damage to soil structure.
- Pre-cast concrete should be used wherever possible. When this is not possible, any works using cast-in-place (poured) concrete must be done in the dry and effectively isolated from any flowing water or drains for a sufficient period to ensure no leachate from the concrete.
- As per the plans, the attenuation shown will be provided by a stone fill under permeable paving. The attenuation volume required is 86m³ and the attenuation zone area is 510.60m² resulting in an attenuation storage depth of 0.560m.
- Following heavy rainfall events, it is important to mitigate excessive outflow of silt and particulates to the surrounding surface water drainage system. During the pre-construction phase, silt outflows to surface water drainage infrastructure (gullies, drains, etc.) along the Cardiffsbridge Road may be mitigated by using sandbags or silt fencing, where suitable. During the construction phase, once site-specific surface water drainage infrastructure has been developed, silt chambers should be blocked off following high rainfall events to prevent excessive silt outflows to the surface water drainage system.

4.5 Protection of Ecological Receptors

4.5.1 Screening for Appropriate Assessment

An Appropriate Assessment Screening Report was published by *NM Ecology Ltd.* in relation to the proposed development which assessed the proximity of the site to nearby sensitive ecological receptors (SPAs, SACs, NHAs) and outlined potential pathways to such receptors during development. The main findings of the report were as follows:

- The Site is not within or adjacent to any European sites and as such, poses no risk of direct impact to any European sites.
- Surface Water Pathways: There are no rivers or streams within or adjacent to the Site, so surface water can be ruled out as a pathway to any European sites.

- **Groundwater Pathways:** If any pollutants soaked to ground within the Site, they would have to pass through 6.4km of intervening subsoils/bedrock before reaching the European sites in Dublin Bay. This would reduce any pollutants to negligible concentrations before reaching the SAC/SPA, in which case they would pose no risk of impacts. Therefore, groundwater can be ruled out as a feasible pathway.
- **Land Pathways:** There is no risk that any pollutants could flow 6.4km over land to reach the SAC.
- **Air Pathways:** The only potential airborne pollutant generated at the Site would be dust. There is no risk that any perceptible quantity of dust could be carried 6.4 km to the European sites.

The Site is not within or adjacent to any European sites, so the proposed development poses no risk of direct impacts. In summary, no feasible pathways were identified between the Site and any European sites.

4.5.2 Ecological Impact Assessment

NM Ecology Ltd. also carried out an Ecological Impact Assessment of the Site to identify any important ecological features that could be affected by development. The report outlines the following predicted impacts to ecological receptors and possible mitigation measures:

- **Protection of treeline and nesting birds:** Some mature trees suitable for nesting birds will be felled to accommodate the proposed development. The canopies of these trees could potentially be used by nesting birds. Under Section 22 of the Wildlife Act 1976 (as amended), it is an offence to kill or injure a protected bird or to disturb their nests. If any of the trees will need to be felled or otherwise modified, it is recommended that it takes place between September and February (inclusive), i.e. outside the nesting season. If this is not possible, an ecologist will survey the affected areas in advance to assess whether any breeding birds or mammals are present. If any are encountered, vegetation clearance will be delayed until the breeding attempt has been completed, i.e. after chicks have fledged and a nest has been abandoned.
- **Biodiversity Enhancement and Net Gain:** A total of 43 trees were identified in the tree survey that accompanies the application (Charles McCorkell Arboricultural Consultant), most of which are in the west of the Site. Some trees whose trunks are located outside the Site boundary were also included, as their canopies and (estimated) root zone are within the Site. It will be necessary to remove 19 trees to accommodate the proposed development, but the remaining 24 trees will be retained.

The loss of baseline habitats will be compensated by biodiversity enhancements proposed as part of the landscaping scheme. The following measures will be implemented:

- Native trees will be planted in the west of the Site and the central courtyard.
- Native hedgerows (hawthorn dominated) will be planted around the northern, eastern, and western boundaries of the Site. Small emergent trees will be included in the hedgerow where there is sufficient space.
- Reinforced grass is required to the south and east of the building to provide access for fire tenders. These areas will be managed as meadows, cut only once per year in late summer/autumn.
- Bird boxes will be provided in public open space, including designs suitable for common

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garden birds (e.g. finches, tits, blackbirds). Swift nest boxes will be installed on the eastern side of the apartment building.

- Small gaps (ca. 200 mm high and wide) will be provided in the eastern boundary to allow ground-dwelling fauna to move between the Site and the undeveloped land to the east of the Site.
- Intensive green / blue roofs (Sedum sp.) will be installed on the roofs of buildings, primarily as a surface water management measure, but with secondary value for biodiversity.

These measures will compensate for the removal of existing habitats, notably the non-native trees in the west of the Site and the dry meadow in the east of the Site. They will also introduce some habitats/features that are not currently present at the Site, e.g. the hedgerow around the site boundary and the swift nest boxes.

It is concluded that as the Site is of low baseline ecological importance and no ecological impacts are currently envisaged, it is not necessary to carry out an Ecological Impact Assessment. When compared to the baseline environment, the proposed development is considered to provide a net gain in biodiversity, and thus complies with Policy GI 16 of the Dublin City Development Plan.

5 Outline Traffic Management Plan

5.1 Background

This Outline Traffic Management Plan (OTMP) is designed to facilitate access to the site by plant, machinery, and work vehicles during collections/ deliveries; and to minimise traffic impacts of construction to residents and amenities in the vicinity of the site. Finglas is a well-developed suburb of Dublin city that receives a high degree of traffic on a regular basis. As such this Outline Traffic Management Plan aims to provide options for the routing of construction traffic that will avoid built-up areas and reduce impact on sensitive receptors (schools, healthcare facilities, public amenity areas). **Section 6.5** provides an outline of alternative routes that avoid travel through Finglas Town Centre.

5.2 Outline Traffic Management Plan

The construction phase OTMP has been prepared in accordance with the following best practices publications and demonstrates compliance with the requirements of the Health and Safety Authority:

1. Chapter 8 of the Traffic Signs Manual and the Safety, Health & Welfare at Work (Construction) Regulations – Department of Transport
2. Temporary Traffic Management Design Guidance – Department of transport, Tourism and Sport.

The main contractor will be required to implement monitoring measures to confirm the effectiveness of the mitigation measures outlined in the OTMP. The OTMP shall address the following issues:

- Site Access & Egress
- Traffic Management Signage
- Routing of Construction Traffic/ Road Closures
- Timings of Material Deliveries to Site
- Traffic Management Speed Limits
- Road Cleaning
- Road Condition
- Road Closures
- Enforcement of Construction Traffic Management Plan
- Details of Working Hours and Days
- Details of Emergency plan
- Communication
- Construction Methodologies
- Particular Construction Impacts.

5.3 Construction Entrance and Construction Traffic Control

5.3.1 Access in

The site's current access point is through the carpark located on the western border of the site, accessible via a gate. An access point is planned for construction on the northwestern perimeter of the site. Construction traffic will approach the site entrance from the north utilising the Cappagh Road which connects the area to the Finglas Bypass, and from the bypass to the M50 from Junction 5 north and south bound. The entrance will be manned by a banksman at all times who will direct traffic safely into the construction site and facilitate the safe navigation of larger construction vehicles as required. The site entry/exit point is detailed in red in **Figure 5.1**.



Figure 5.1: Site access point (Source: Google Maps).

The entrance gate will be within the boundaries of the site and will prevent incoming vehicles from causing obstruction to local traffic on Cardiffsbridge Road. Since only one access gate is available, at most one HGV may enter/ exit the site at a time. Strong lines of communication with hauliers, strict delivery schedules and just-in-time delivery methods will be in operation to ensure no more than two trucks will visit the site at any one time. It is envisaged that strict adherence to these protocols will ensure that no queuing will occur on Cardiffsbridge Road.

5.3.2 Access Out

When vehicles are due to depart from the site the banksman will ensure the roadway is safe to proceed and will communicate with the driver in the cab. The proposed construction exit from the site will be the same as that used for entrance to the site, see **Figure 5.1**.

The main contractor is required to ensure the provision of adequate guarding and lighting appropriate to the circumstances. Traffic signs should be placed in advance of the works area

on both sides to ensure adequate warning to the general public and maintained, when necessary, they should be operated as reasonably required for the safe guidance or direction of the public with regard to the needs of people with disabilities. The main contractor will comply with Regulation 97 of the Safety, Health, and Welfare at Work (Construction) Regulations 2013.

Access to the construction site will only be to authorised persons. During afterhours, security will be employed by the main contractors to ensure no unauthorised access.

5.4 Deliveries to Site / Site Access

The site entrance will be gated and manned at all times with access only permitted for site vehicles and plant movements when necessary.

Deliveries of materials to site will be planned and programmed to ensure that the materials are only delivered when required by adopting a 'just in time', lean construction management approach. There will be periods where multiple vehicle deliveries will be required, e.g., site fill material under roads, apartments and landscape areas, pre-cast concrete and large concrete pours. These will be planned well in advance and no queuing of vehicles will be allowed on the public road at the entrance to the site. Supply chain to be directed as not to travel in convoys greater than three at any time.

All off-loading of material will take place within the site, remote from the public road and access via the agreed access construction point only. Bulk deliveries to take place outside of peak traffic hours within a six-day week as to minimise impact on the existing road network.

Access control: The site entrance will always be controlled by a banksman. The contractor will carry out a visitor induction briefing for all visitors or other persons who need access to the construction area. All visitors to the site will be required to have current 'Safe Pass' cards.

Material delivery: Material deliveries to the site will be coordinated as to avoid peak traffic hours associated with the neighbouring estates which could be expected around regular commuting times in the morning and evening.

Sign management: Signs are to comply with statutory requirements on public roads. Other construction sites may be carrying out construction activity at the same time as the subject site. It is therefore imperative that directions to each site are distinctly identifiable.

5.5 Routing of Construction Traffic

All traffic associated with the development travelling from north of the site must turn on to Mellowes Road from the Finglas Bypass and continue to Cardiffsbridge Road to access point of the site. Provision of suitably large national roads in the immediate vicinity of the site are limited and as such, construction traffic must travel through local roads associated with the residential estates surrounding the site. Using the M50 motorway as a primary source of construction traffic, it is proposed that vehicles utilise Junction 5 and travel southbound along the N2 Finglas Bypass, taking the exit to Finglas via R103. In due consideration of the potential additional travel time caused by disrupted traffic flow within Finglas when travelling from the west, it is not expected that the proposed transport route will cause any undue additional travel time to the site. See **Figure 5.2** and **Figure 5.3** for the suggested construction traffic route.

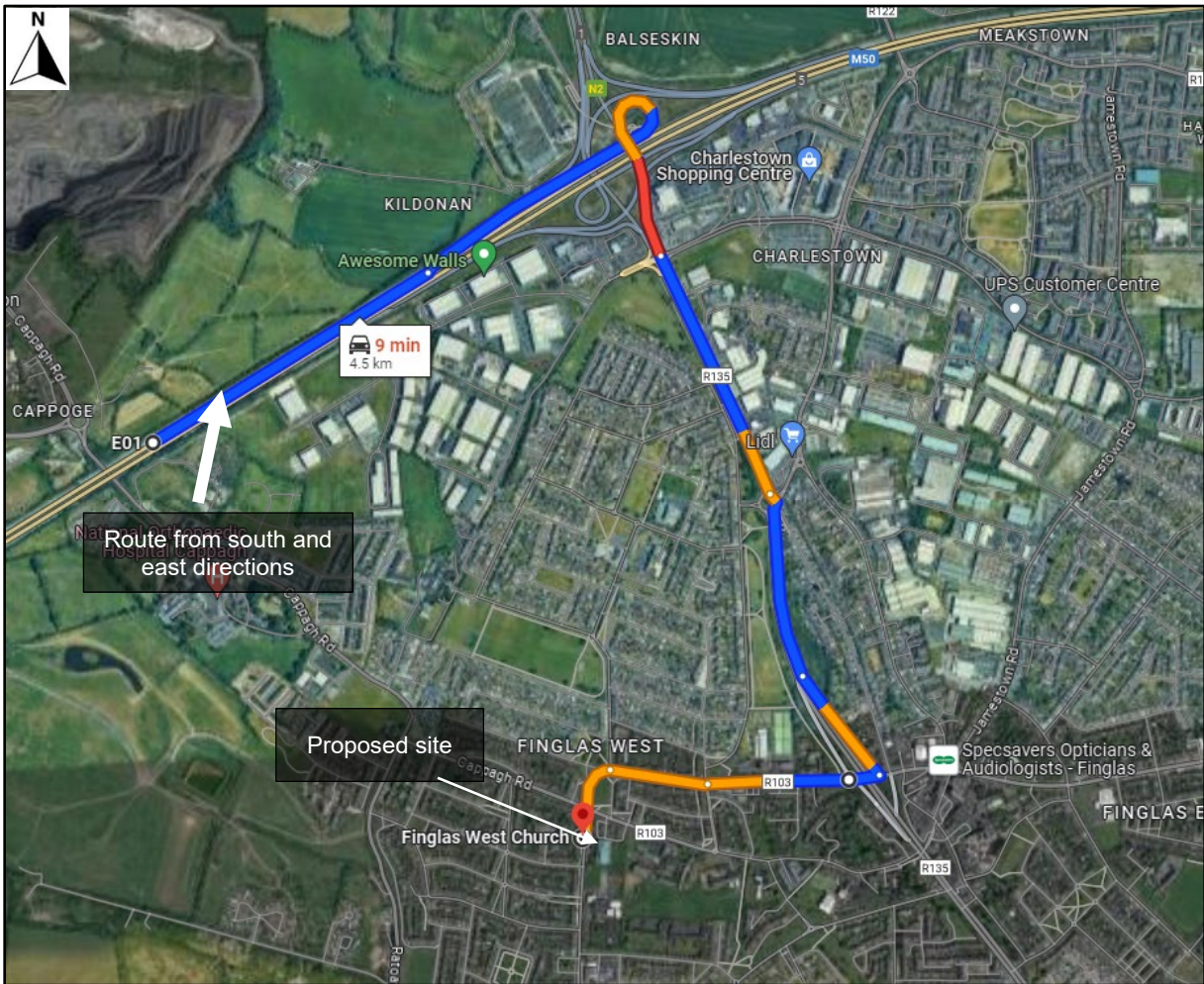


Figure 5.2: Traffic routes from south and east to proposed site (Source: Google Maps).

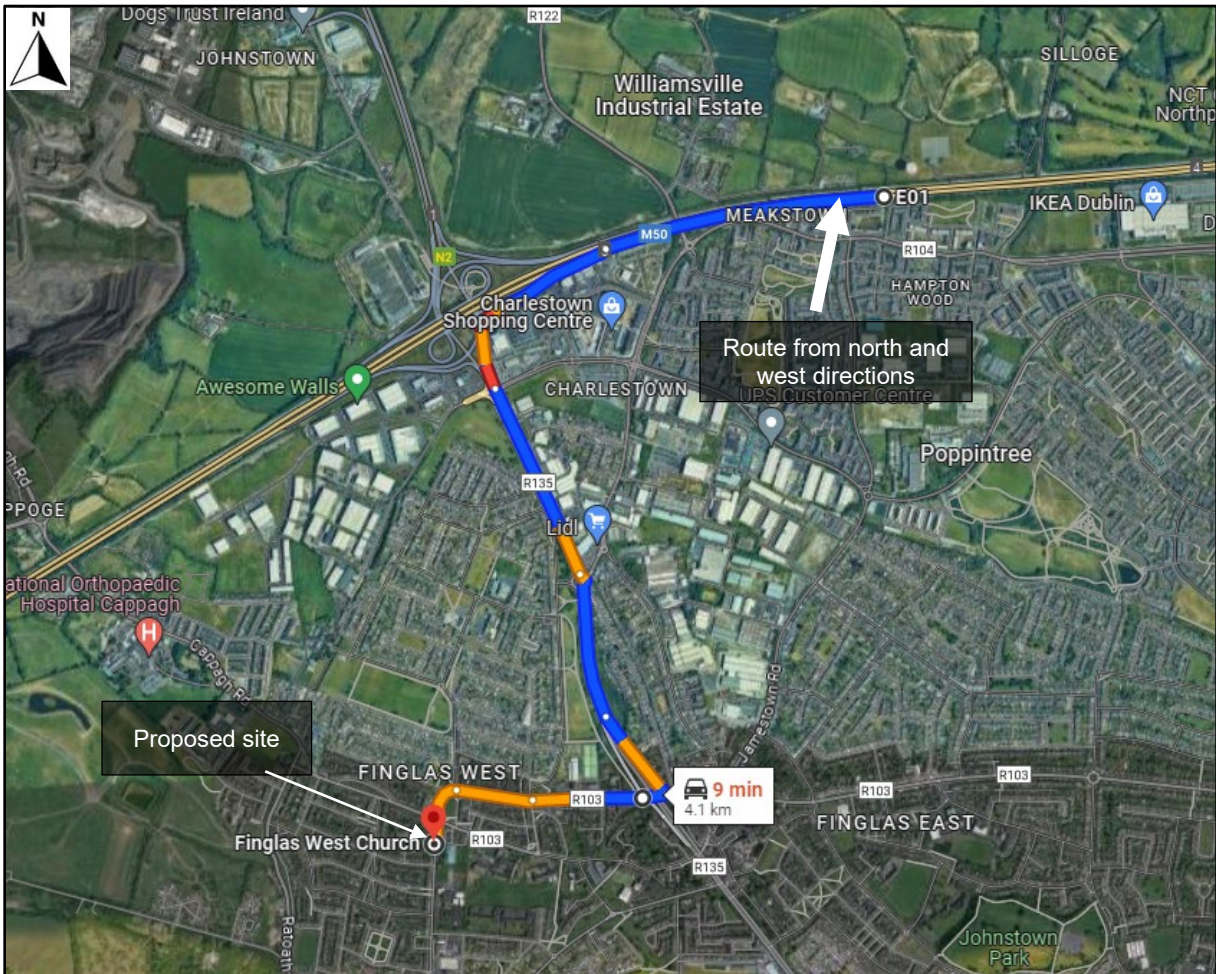


Figure 5.3: Traffic routes from north and west to proposed site (Source: Google Maps).

5.6 Traffic Management Speed Limits

Adherence to posted/ legal speed limits will be emphasised to all contractors and sub-contractors during induction training.

Drivers of construction vehicles/ HGVs will be advised that vehicular movements in locations, such as local community areas, shall be restricted to 50 km/h. Special speed limits of 30 km/h shall be implemented for construction traffic in sensitive areas such as residential. Such recommended speed limits will only apply to construction traffic and shall not apply to general traffic.

5.7 Road Cleaning

A wheel wash facility will be provided prior to exit of the site when required throughout the various stages of construction on-site. This is to ensure that minimal suspended solids reach nearby waterbodies or surface water drainage systems, and that minimal road sweeping will be required on the public roads. Although a requirement for road sweeping cannot be eliminated entirely, control measures within site are aimed at limiting the need for road sweepers. If conditions require it, then a manned power washer shall be put in place to assist the wheel

wash system.

Road sweeping operations to remove any project related dirt and material deposited on the road network by construction/ delivery vehicles will be utilised as required. It is recommended that road sweepers used have a vacuum function that can remove fine silt and dust from nearby surfaces effectively and prevent them from entering nearby waterbodies and drainage systems. All material collected will be disposed of to a licensed waste facility.

The following additional measures will be taken to ensure that the site, public roads and surroundings are kept clean and tidy:

- A regular program of site tidying will be established to ensure a safe and orderly site.
- Food waste will be strictly controlled on all parts of the site.
- Mud spillages on roads and footpaths outside the site will be cleaned regularly and will not be allowed to accumulate. This process is pertinent in cases of heavy rainfall where sediments can more easily reach nearby waterbodies and drainage systems.

5.8 Road Condition

The higher volume of heavy vehicle traffic movements and the nature of the payload may create problems to the local road network in terms of:

- Fugitive losses from wheels, trailers, or tailgates.
- Localised areas of subgrade and wearing surface failure.

The main contractors shall ensure that:

- Loads of materials leaving each site will be evaluated and covered if considered necessary to minimise potential dust impacts during transportation.
- The transportation contractor shall take all reasonable measures while transporting waste or any other materials likely to cause fugitive losses from a vehicle during transportation to and from site, including but not limited to:
- Covering of all waste or material with suitably secured tarpaulin/ covers to prevent loss.
- Utilisation of enclosed units to prevent loss.
- Roads forming part of the haul routes will be monitored visually throughout the construction period and a truck mounted vacuum mechanical sweeper will be assigned to roads along the haul route as required.

5.9 Enforcement of TMP

The traffic management plan will be enforced by both the Construction Project Manager and the Resident Engineer.

All project staff and material suppliers will be informed of the measures proposed by the TMP during site induction and will be required to adhere to the final TMP. As outlined above, the contractor shall agree and implement monitoring measures to confirm the effectiveness of the TMP.

5.10 Working Hours

Deliveries of materials to site will generally be between the hours of 08:00 and 19:00 Monday to Friday, and 08:00 to 14:00 on Saturdays. No deliveries will be scheduled for Sundays or Bank Holidays.

5.11 Emergency Procedures

The main contractor shall ensure that unobstructed access is provided to all emergency vehicles along all routes and site accesses. The contractor shall provide to the local authorities and emergency services, contact details of the contractor's personnel responsible for construction traffic management. In the case of an emergency the following procedure shall be followed:

- Emergency Services will be contacted immediately by dialling 112.
- Exact details of the emergency/ incident will be given by the caller to the emergency line operator to allow them to assess the situation and respond in an adequate manner.
- The emergency will then be reported to the Site Team Supervisors and the Safety Officer.
- All construction traffic shall be notified of the incident (where such occurs off site).
- Where required, appointed site first aiders will attend the emergency immediately.
- The Safety Officer will ensure that the emergency services are on their way.

5.12 Communication

The main contractor shall ensure that close communication with Dublin City Council and emergency services is maintained throughout the construction phase. Such communications shall include:

- Submissions of proposed traffic management measures/ closures for comment and approval.
- Ongoing reporting relating to the condition of the road network and updates to construction programming.
- Information relating to local and community events that could conflict with proposed traffic management measures and construction traffic aimed towards implementing alternative measures to avoid such conflicts.
- The contractor shall also ensure that the local community is informed of any proposed traffic management measures in advance of their implementation. Such information shall be disseminated by posting advertisements in local newspapers and delivering leaflets to houses in the affected areas. Such information shall contain contact information for members of the public to obtain additional information and to provide additional knowledge such as local events, sports fixtures, etc., which may conflict with proposed traffic management measures.

6 Implementation

6.1 Role and Responsibilities

Due to the scale and nature of this development, the appointment of a full-time environmental manager is deemed surplus to requirements for the duration of the project. The Construction Project Manager will be responsible for the day-to-day implementation of the measures outlined in the Project CEMP. The Construction Project Manager will be supported by an Environmental Consultant who will be involved in the project on an ad-hoc basis should unforeseen or significant environmental incidents arise.

6.1.1 Construction Project Manager

The Construction Project Manager will have the overall responsibility of ensuring the measures outlined in the Project CEMP are adhered to for the duration of the construction phase. The primary responsibilities of the Construction Project Manager are as follows:

- Promotion of awareness of environmental issues associated with each project phase.
- Ensure adherence with all environmental and traffic management standards listed in the Project CEMP.
- Facilitate environmental & waste audits and site visits.
- Monitor the impact of construction traffic on local traffic conditions.
- Awareness and implementation of relevant legislation, codes of practice, guidance notes as stated in the CEMP.
- Conduct regular site inspections to facilitate the timely identification of environmental risks or incidents.
- Ensure all construction activities are carried out with minimal risk to the environment.
- Report environmental incidents in a timely manner to the project Environmental Consultant and the relevant authorities.

6.1.2 Construction Project Manager Contact Details

Contact details of the project manager are pending until a project manager has been appointed.

- Name: Pending
- Telephone: Pending
- Email: Pending

6.1.3 Project Environmental Consultant

Given the scale of the proposed development and the sensitivity of the receiving environment a dedicated Environmental Consultant is not deemed to be required. Should any issues or impacts arise throughout the project then a suitable Environmental Contractor will be contacted. The primary responsibilities of the Project Environmental Consultant are as follows:

- Quality assurance of the Project CEMP.
- Update of the Project CEMP as required paying particular attention to site-specific environmental hazards or changes in legislation.

- Ensuring compliance of Project CEMP with the conditions of the Planning Permission.
- Provide expertise to the Construction Project Manager on environmental concerns.
- Conduct the various specialist environmental monitoring tasks outlined within the Project CEMP (noise, dust, surface water monitoring, etc.).
- Prompt response to environmental issues if they arise.

6.1.4 Resident Engineer

Typically, the Resident Engineer's primary role involves assurance that the construction work of a project is carried out according to the quality, time and cost requirements of the contract. A significant degree of cross-over can usually be anticipated between the roles of a Resident Engineer, a Construction Project Manager and an Environmental Consultant. With respect to the Project CEMP, the Resident Engineer is expected to play a crucial role in the Traffic Management Plan (TMP) along with the following responsibilities:

- Performing or coordinating site inductions.
- Monitoring the performance of subcontractors.
- Monitoring the performance of the traffic management plan.
- Managing and supervising less experienced site engineers and operatives.
- Ensuring that work activities have been carried out in accordance with the plans, specifications, and industry standards.
- Ensuring that tests and inspections are performed.
- Liaising with construction management to remove any hazards associated with work activities.
- Ensuring that delivered materials meet specifications and established quality standards.
- Initiating and maintaining records, back-charge procedures, progress reports etc.

6.2 Awareness and Training

6.2.1 Environmental Induction

The key environmental topics outlined in the Project CEMP will be summarised and integrated into the general site induction. Site-specific concerns and best work practices will be outlined to all contractors and sub-contractors due to carry out work at the site. As a minimum this will include:

- The roles and responsibilities of the Construction Project Manager the Environmental Consultant and the Resident Engineer along with the responsibilities of contractors/sub-contractors themselves.
- Incident and complaints procedure.
- Outline of the CEMP structure.
- Site-specific environmental concerns.
- Best work practices

6.2.2 Toolbox Talks

Daily toolbox talks will be conducted by the Construction Project Manager as standard practice. It is the duty of the Construction Project Manager to liaise with the Project Environmental Consultant and Resident Engineer to assess site operations for environmental concerns particularly as the project advances and new activities commence. Appropriate mitigation

measures will be devised and communicated to the relevant personnel prior to the commencement of any such activities.

6.3 Environmental Incidents and Complaints Procedure

The Construction Project Manager will maintain a register of environmental incidents which will document the nature, scale and severity of any environmental incident or complaint which arises due to site activities. In the event of an environmental incident the following steps must be followed:

- The Project Environmental Consultant is notified immediately.
- The Project Environmental Consultant will liaise with the competent authority if necessary.
- The details of the incident will be recorded on an Environmental Incident Form which will record the following details:
 1. Cause of the incident
 2. Extent of the incident
 3. Immediate actions
 4. Remedial measures
 5. Recommendations made to avoid reoccurrence.
- If the incident has impacted on an ecologically sensitive receptor (SPA, SAC, NHA) an ecological specialist will be consulted.
- The Project Environmental Consultant and Construction Project Manager will fully cooperate with any investigations conducted by the competent authority.

7 Conclusion

This Construction Environmental Management Plan (CEMP) will form part of the construction contract and is designed to reduce possible impacts which may occur during the construction of the proposed development.

The proposed development shall be constructed and developed to minimise the generation of construction and demolition waste. During the construction phase, construction waste shall be stored and segregated in dedicated waste storage areas which shall optimise the potential for off-site reuse and recycling. All construction waste materials shall be exported off-site by an appropriately permitted waste contractor. Measures and policies for proper waste management during this project are outlined in the dedicated Resource Waste Management Plan report for this project.

Extensive measures shall be taken to prevent uncontrolled emissions to drains and gullies leading off the site. Noise mitigation measures will be utilised as required. Several measures have been outlined to ensure adequate dust suppression throughout the project. Noise and dust monitoring shall be carried out at various stages throughout the project to ensure compliance with the relevant standards.

Suitably qualified personnel including a Construction Project Manager, Project Environmental Consultant and Resident Engineer will be appointed to implement the procedures and protocols relevant to their profession as outlined in this CEMP.

The Client shall be responsible for ensuring that The Contractor manages the construction activities in accordance with this Construction Project Management Plan and shall ensure that any conditions of planning are incorporated into the final Construction Project Management Plan prepared by the appointed works contractor.

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**Appendix A: Risk Assessment as per Air Quality
Monitoring and Noise Control Unit's Good Practice
Guide for Construction and Demolition**

Risk Assessment A – Locality/Site Information

	Low	Medium	High
Expected duration of work			
Less than 6 months			
6 months to 12 months			
Over 12 months			x
Proximity of nearest sensitive receptors			
Greater than 50 metres from site	x		
Between 25m and 50m			
Less than 25 metres			
Hospital or school within 100 metres			
Day time ambient noise levels			
High ambient noise levels (>65dB(A))			
Medium ambient noise levels (55-65dB(A))			
Low ambient noise levels (<55dB(A))			x
Working Hours			
8am – 7pm Mon-Fri; 9am-2pm Sat	x		
Some extended evening or weekend work			
Some night-time working, including likelihood of concrete power floating at night			
SUBTOTAL A	2	0	2

Risk Assessment B – Works Information

	Low	Medium	High
Location of works			
Majority within existing building			
Majority External			x
External Demolition			
Limited to two weeks			
Between 2 weeks and 3 months			
Over three months			
Ground Works			
Basement level planned			
Non-percussive methods only			
Percussive methods for less than 3 months		x	
Percussive methods for more than 3 months			
Piling			
Limited to one week			
Bored Piling Only			
Impact or vibratory piling			
Vibration generating activities			
Limited to less than 1 week			
Between 1 week and 1 month		x	
Greater than 1 month			
SUBTOTAL B	0	2	1

Total Risk Assessment

	Low	Medium	High
Risk Assessment A	2	0	2
Risk Assessment B	0	2	1
Total	2	2	3

The site is assessed as a moderate-to-high overall.

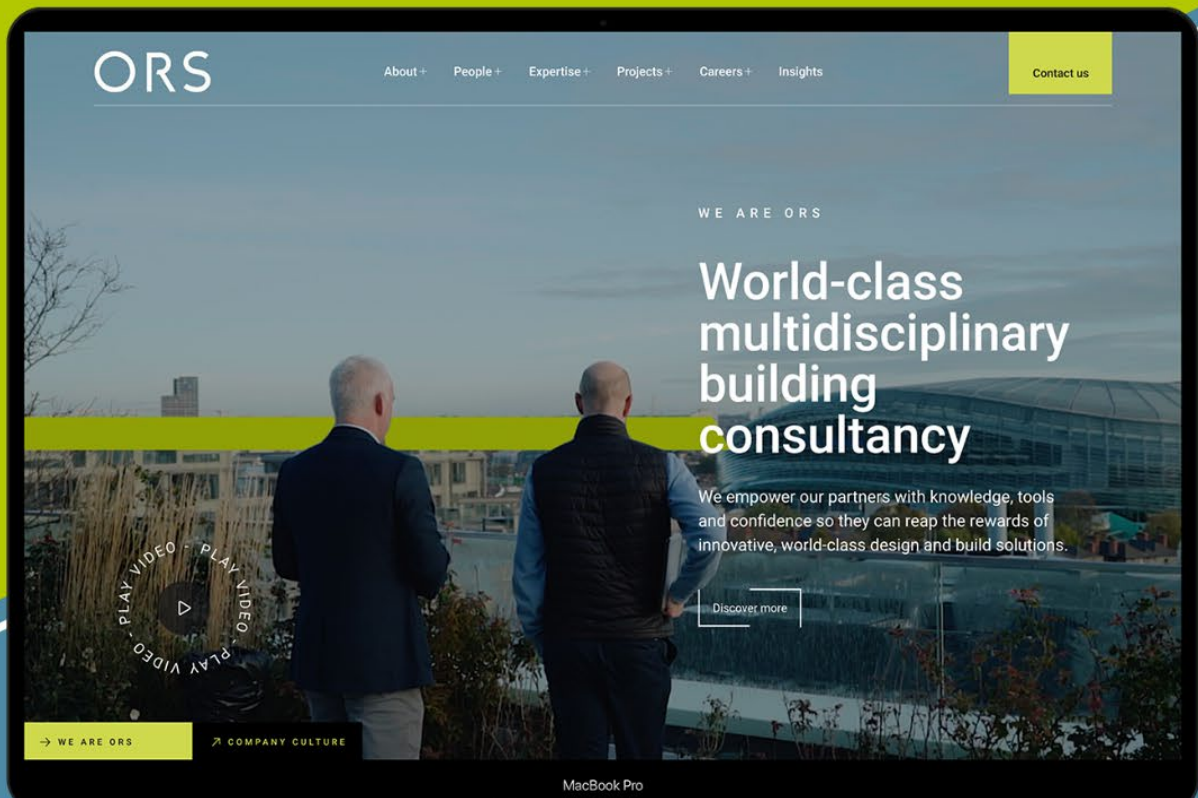
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 Block A,
Marlinstown Business Park,
Mullingar, Co. Westmeath,
Ireland, N91 W5NN

 Suite: G04, Iconic Offices,
Harmony Row,
Dublin 2, Co. Dublin,
Ireland, D02 H270

 Level One, Block B,
Galway Technology Park,
Parkmore, Co. Galway,
Ireland, H91 A2WD

 Office 2, Donegal Town,
Enterprise Centre, Lurganboy,
Donegal Town, Co. Donegal,
Ireland, F94 KT35

 Office 4, Spencer House,
High Road, Letterkenny,
Co. Donegal,
Ireland, F92 PX8N

 NSQ2,
Navigation Square,
Albert Quay, Cork
Ireland, T12 W351